



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/606,907	06/26/2003	Lei Wu	MP0298	5697
45641	7590	08/05/2005	EXAMINER	
THE LAW OFFICES OF ANDREW D. FORTNEY, PH.D., P.C. 7257 N. MAPLE AVE., SUITE 107 FRESNO, CA 93720			LE, DON P	
			ART UNIT	PAPER NUMBER
			2819	

DATE MAILED: 08/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/606,907

Applicant(s)

WU ET AL.

Examiner

Don P. Le

Art Unit

2819

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-44, 46-51, 53, 54 and 56-121 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3, 9, 14, 22, 23, 26, 33, 37, 41-43, 46, 49, 60, 67, 71, 74, 80, 81, 102, 114 and 120 is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4-8, 10-13, 15-21, 24, 25, 27-32, 34-36, 38-40, 44, 47, 48, 50, 51, 53, 54, 56-59, 61-66, 68-70, 72, 73, 75-79, 82-101, 103-113, 115-119, 121 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

Drawings

1. Figures 1 and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 12, 13, 24, 25, 27-32, 34-36, 38, 44, 47-51, 53, 56-58, 61-66, 68, 69, 70, 72, 73, 75, 78, 82-86, 88-98, 111-113, 116, 117 and 121 are rejected under 35 U.S.C. 102(a) as being anticipated by applicant prior art figures 1 and 2.

4. With respect to claims 1, 12, 13, 44, 51, 57, 58, 73 and 78, applicant prior art figures 1 and 2 disclose a circuit, comprising:

a differential signal transmission line (56, 58);

a common mode circuit comprising first (14) and second (16) resistance in series, the common mode circuit in communication with said differential signal transmission line, configured to reduce a swing of said differential signal transmission line; and

at least one overvoltage protection circuit (52, 54) in communication with said common mode circuit, wherein at least part of said common mode circuit is electrically interposed between said overvoltage protection circuit and said differential signal transmission line.

5. With respect to claims 53, 75, 97, 98, 116 and 117 the applicant prior art is a low voltage differential amplifier.

6. With respect to claims 24 and 34-36, applicant prior art figure 2 discloses a circuit, comprising:

means for transferring a differential signal (56, 58);

means for reducing a swing of said means for transferring (14, 16); and

at least one means (52, 54) for protecting circuitry to which said differential signal is to be transferred from an overvoltage, wherein at least part of said means for reducing is electrically interposed between said at least one means for protecting and said means for transferring.

7. With respect to claims 25 and 111, applicant prior art figure 2 discloses first and second resistances (14, 16).

8. With respect to claim 27, applicant prior art figure 2 discloses a means for buffering (12).

9. With respect to claims 28 and 112, applicant prior art figure 2 discloses the first and second resistances are less than the buffer.

10. With respect to claims 29-32 and 113, applicant prior art figure 2 discloses the means for applying a common mode voltage (18).

Art Unit: 2819

11. With respect to claim 38, applicant prior art is a low voltage differential amplifier.
12. With respect to claims 47 and 68, applicant prior art figure 2 discloses each of the first and second resistance is less than impedance of the input buffer.
13. With respect to claims 48, 49, 50, 69, 70 and 72, applicant prior art figure 2 discloses a third resistor (18).
14. With respect to claim 56, applicant prior art figure 2 discloses first and second pins (Rx+, Rx-).
15. With respect to claims 61-66, 82-85, it is inherent in the applicant prior art figure 2 that there must be a receiver and transmitter in the apparatus of applicant prior art.
16. With respect to claims 86, 88-96, the methods therein are inherent in the applicant prior art figure 2.
17. With respect to claim 121, applicant prior art figure 2 discloses a circuit comprising:
 - a differential input signal (Rx+, Rx-);
 - a voltage divider (14, 16) coupled to the differential input signal;
 - a common mode voltage (20) coupled to a first node of the voltage divider (node between 14 and 16);
 - a first overvoltage protection circuit (52) coupled to a second node (56) of the voltage divider;
 - a second overvoltage protection circuit (54) coupled to a third node (58) of the voltage divider.

Claim Rejections - 35 USC § 103

18. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

19. Claims 2, 5-8, 10, 11, 15-21, 39, 54, 76, 87, 99-110 and 118 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant prior art figures 1 and 2 in view of Jenkins et al. (US 6,738,248).

20. With respect to claims 17, 39, 54, 76, 77, 79, 87, 118 and 119, applicant prior art does not specifically show the overvoltage protection circuit contains diode as claimed by applicant.

Figure 1 of Jenkins discloses an overvoltage protection circuit comprising diodes (D1, D2) for the purpose of overvoltage protection. It would have been obvious to one of ordinary skill of art at the time the invention was made to have the overvoltage protection circuit of applicant prior art with diode circuitry as taught by Jenkins for the purpose of overvoltage protection.

21. With respect to claims 18, 77, 105 and 119, applicant specifically claimed the at least one diode has a threshold voltage greater than a voltage swing. This is inherent in the apparatus of applicant prior art in view of Jenkins. Otherwise the overvoltage protection will not work.

22. With respect to claims 19-21, the diodes of Jenkins are in series (D1, D2).

23. With respect to claims 2 and 4, applicant prior art figure 2 discloses the first and second resistances comprise first (14) and second (16) termination resistors.

24. With respect to claim 5, applicant prior art figure 2 discloses an input buffer (12).

Art Unit: 2819

25. With respect to claims 6, 99, 100 and 106, applicant prior art figure 2 discloses each of the first and second resistance is less than impedance of the input buffer.

26. With respect to claims 7, 8, 10, 11, 103, 104 and 107-110, applicant prior art figure 2 discloses a third resistor (18).

27. With respect to claims 15, 16 and 101, the apparatus of applicant in view of Jenkins is a low voltage differential circuit.

Allowable Subject Matter

28. Claims 3, 9, 14, 22, 23, 26, 33, 37, 41, 42, 43, 46, 59, 60, 67, 71, 74, 80, 81, 102, 114, 115 and 120 are allowed.

30. The following is an examiner's statement of reasons for allowance:

With respect to claims 3, 9, 14, 26, 33, 37, 67, 71, 74, 102 and 120, the prior art does not teach the overvoltage protection circuit is connected between the first and second resistances.

With respect to claims 22 and 42, 59 and 80, the prior art does not teach third and fourth resistances.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

30. Applicant's arguments filed 6/29/2005 have been fully considered but they are not persuasive.

Art Unit: 2819

Applicant's arguments that examiner cannot use figures 1 and 2 of the present application against the present claims. This argument is incorrect in that applicant already admitted these two figures to be prior art in the disclosure (see the specification background). The disclosure describes figures 1 and 2 as "conventional high-speed differential analog circuits". As understood by one of ordinary skill in the art, the term "conventional art" is equivalent to "prior art".

As per MPEP section 2129

A statement by an applicant during prosecution identifying the work of another as "prior art" is an admission that that work is available as prior art against the claims, regardless of whether the admitted prior art would otherwise qualify as prior art under the statutory categories of 35 U.S.C. 102. *Riverwood Int'l Corp. v. R.A. Jones & Co.*, 324 F.3d 1346, 1354, 66 USPQ2d 1331, 1337 (Fed Cir. 2003).

Therefore, the use of applicant figures 1 and 2 as prior art is proper.

31. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

Art Unit: 2819

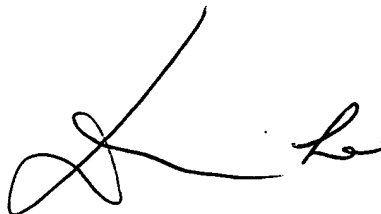
however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

32. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Don P. Le whose telephone number is 571-272-1806. The examiner can normally be reached on 7AM - 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael J. Tokar can be reached on 571-272-1812. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

8/3/2005

A handwritten signature in black ink, appearing to be 'Don P. Le', with a stylized, cursive script.

DON LE
PRIMARY EXAMINER